CLAIMS

1. A semiconductor device comprising:

a transistor;

a current supply means electrically connected to the transistor; and

a precharge circuit comprising a first terminal electrically connected to the transistor and a second terminal;

wherein the precharge circuit supplies a charge to the transistor according to a comparison between a potential of the first terminal and a potential of the second terminal.

2. A semiconductor device according to Claim 1, wherein the precharge circuit comprising:

a comparison control circuit for the comparison between the potential of the first wiring and the potential of the second wiring; and

a switch controlled by the comparison control circuit;

3. A semiconductor device according to Claim 2, wherein the comparison control circuit comprises an operational amplifier.

4. A semiconductor device according to Claim 2, wherein the comparison control circuit comprises a chopper inverter transistor.

5. An electronic apparatus having the semiconductor device according to Claim 1, wherein the electronic apparatus is selected from the group consisting of a light emitting device, a digital still camera, laptop personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera and a portable phone.

6. A semiconductor device comprising:

a transistor;

a current source electrically connected to the transistor;

a charge supply means; and

a precharge circuit comprising:

a comparison control circuit having a first terminal electrically connected to the transistor, a second terminal and third terminal; and

a switch electrically connected the third terminal;

wherein the charge supply means is electrically connected to the transistor.

7. A semiconductor device according to Claim 6, wherein the charge supply means is a current source.

8. A semiconductor device according to Claim 6, wherein the charge supply means is a power source.

9. The semiconductor device according to Claim 6, wherein the comparison control circuit comprises an operational amplifier.

10. The semiconductor device according to Claim 6, wherein the comparison control circuit comprises a chopper inverter transistor.

11. An electronic apparatus having the semiconductor device according to Claim 6, wherein the electronic apparatus is selected from the group consisting of a light emitting device, a digital still camera, laptop personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera and a portable phone.

12. A semiconductor device comprising:

a transistor comprising a source electrode, a drain electrode and a gate electrode;

a current source electrically connected to the transistor;

a charge supply means; and

a precharge circuit comprising:

a comparison control circuit having a first terminal electrically connected to the transistor, a second terminal and third terminal; and

a switch electrically connected the third terminal;

wherein the gate electrode is electrically connected to any one of the source electrode and the drain electrode, and

wherein the charge supply means is electrically connected to any one of the source electrode and the drain electrode.

13. A semiconductor device according to Claim 12, wherein the charge supply means is a current source.

14. A semiconductor device according to Claim 12, wherein the charge supply means is a power source.

15. The semiconductor device according to Claim 12, wherein the comparison control circuit comprises an operational amplifier.

16. The semiconductor device according to Claim 12, wherein the comparison control circuit comprises a chopper inverter transistor.

17. An electronic apparatus having the semiconductor device according to Claim 12, wherein the electronic apparatus is selected from the group consisting of a light emitting device, a digital still camera, laptop personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera and a portable phone.

18. A display device comprising:

a pixel;

a transistor;

a current supply means electrically connected to the transistor; and

a precharge circuit comprising a first terminal electrically connected to the transistor and a second terminal;

wherein the precharge circuit supplies a charge to the transistor according to a comparison between a potential of the first terminal and a potential of the second terminal, and

wherein the transistor supplies a current to the pixel.

19. A display device according to Claim 18,

wherein the pixel has a light emitting element, and

wherein the transistor supplies a current to the light emitting element.

20. A display device according to Claim 18, wherein the precharge circuit comprising:

a comparison control circuit for the comparison between the potential of the first wiring and the potential of the second wiring; and

a switch controlled by the comparison control circuit;

21. A display device according to Claim 20, wherein the comparison control circuit comprises an operational amplifier.

22. A display device according to Claim 20, wherein the comparison control circuit comprises a chopper inverter transistor.

23. An electronic apparatus having the display device according to Claim 18, wherein the electronic apparatus is selected from the group consisting of a light emitting device, a digital still camera, laptop personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera and a portable phone.

24. A display device comprising:

a pixel;

a transistor electrically connected to the pixel;

a current source electrically connected to the transistor;

a charge supply means; and

a precharge circuit comprising:

a comparison control circuit having a first terminal electrically connected to the transistor, a second terminal and third terminal; and

a switch electrically connected the third terminal;

wherein the charge supply means is electrically connected to the transistor.

25. A display device according to Claim 24,

wherein the pixel has a light emitting element, and

wherein the transistor is electrically connected to the light emitting element.

26. A display device according to Claim 24, wherein the charge supply means is a current source.

27. A display device according to Claim 24, wherein the charge supply means is a power source.

28. The display device according to Claim 24, wherein the comparison control circuit comprises an operational amplifier.

29. The display device according to Claim 24, wherein the comparison control circuit comprises a chopper inverter transistor.

30. An electronic apparatus having the display device according to Claim 24, wherein the electronic apparatus is selected from the group consisting of a light emitting device, a digital still camera, laptop personal computer, a mobile computer, a portable

image reproducing device, a goggle type display, a video camera and a portable phone.

31. A display device comprising:

a pixel;

a transistor comprising a source electrode, a drain electrode and a gate electrode;

a current source electrically connected to the transistor;

a charge supply means; and

a precharge circuit comprising:

a comparison control circuit having a first terminal electrically connected to the transistor, a second terminal and third terminal; and

a switch electrically connected the third terminal;

wherein the gate electrode is electrically connected to any one of the source electrode and the drain electrode,

wherein the charge supply means is electrically connected to any one of the source electrode and the drain electrode, and

wherein the pixel is electrically connected to any one of the source electrode and the drain electrode.

32. A display device according to Claim 31, wherein the charge supply means is a current source.

33. A display device according to Claim 31, wherein the charge supply means is a power source.

34. The display device according to Claim 31, wherein the comparison control circuit comprises an operational amplifier.

35. The display device according to Claim 31, wherein the comparison control circuit comprises a chopper inverter transistor.

36. An electronic apparatus having the display device according to Claim 31, wherein the electronic apparatus is selected from the group consisting of a light emitting device, a digital still camera, laptop personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera and a portable phone.